REMARKS

Claim 1 has been amended to more clearly define Applicant's invention. In particular, this claim recites that the dispersant composition comprises an aqueous solvent and i) at least one non-ionic surfactant, in an amount of between about 3% and 25% based on the total weight of the dispersant composition, which is insoluble in water and ii) at least one polymer comprising at least one salt of a carboxylic acid group, in an amount between about 5% and 20% by weight based on the total weight of the dispersant composition, which is soluble in water. Support for these amendments can be found throughout the present application and claims as originally filed. For example, support for the amounts of the non-ionic surfactant and the polymer can be found in paragraph [0019] of the present application. Support for the polymer comprising at least one salt of a carboxylic acid group being soluble in water can be found, for example, in paragraph [0021] of the present application and original claim 16, which is hereby cancelled in view of this amendment. Support for the dispersant composition comprising an aqueous solvent can be found, for example, in original claim 17, which is hereby cancelled in view of this amendment. In addition, claim 18, which had depended directly from claim 17, has been amended to depend from claim 1, as well as to correct a typographical error. Also, claims 20 and 21 have been amended to provide proper antecedent basis for the phrase "the base".

Finally, claims 22 and 31 have been amended to recite the features of present claims 23 and 36 respectively, which are hereby cancelled in view of this amendment. Also, claims 37-40, which had depended directly from claim 36, have been amended to depend from claim 31. No new matter has been added.

Thus, claims 1, 3-6, 10-12, 18-22, 24-35, and 37-41 are pending.

Rejection of Claims under 35 U.S.C. § 102

The Examiner has rejected claims 1, 3-6, 10-12, 16-22 and 31-35 under 35 U.S.C. § 102(b) as being anticipated by Martin et al. (U.S. Patent Application Publication No. 2003/0191231), for the rationale recited in paragraph 2 of the Office Action dated August 11, 2006.

In paragraphs 7-12 of the Final Office Action, the Examiner summarizes Applicant's previous arguments and states that these have been fully considered but are not persuasive.

In paragraph 8 of the Final Office Action, the Examiner states that, while Applicant contends that Martin et al. does not disclose a composition comprising two separate components, Martin et al. discloses that preferred non-ionic water dispersing groups are polyalkylene oxide groups, more preferably polyethylene oxide groups, which are readable as the non-ionic surfactant of present claim 1. The Examiner further states that Martin discloses that preferably at least 30%, more preferably at least 60%, most preferably at least 90%, and especially at least 94% by weight of the dispersed polymer(s) is present as insoluble polymer over the whole pH range and exemplified Neocryl BT-24 acrylic emulsion polymer, also disclosed in the present application. The Examiner states that this is readable as component ii) of present claim 1. The Examiner therefore concludes that all of the limitations of present claim 1 are expressly met by Martin.

Applicant respectfully disagrees. Regarding claims 1, 3-6, 10-12, and 16-21, claim 1 as amended recites a dispersant composition comprising an aqueous solvent and i) at least one non-ionic surfactant and ii) at least one polymer comprising at least one salt of a carboxylic acid group. The non-ionic surfactant is a polyalkylene oxide that is insoluble in water, and the polymer is soluble in water. As stated in the present application for this specific combination of components, "it may be said that the polymer acts as a dispersing or solubilizing agent for the water-insoluble non-ionic surfactant, thereby producing an aqueous solution or dispersion of the insoluble surfactant" (see paragraph [0021] of the present application). This dispersant composition is used to disperse a pigment in a liquid vehicle, thereby forming the pigment

composition of the present invention as well as the aqueous coating composition of the present invention.

Applicant continues to believe that Martin et al. does not describe such a dispersant composition. While Martin et al. describes an aqueous composition which includes a crosslinkable polyester oligomer which may preferably contain a non-ionic water dispersing groups such as a polyalkylene oxide group, there is no disclosure, teaching or suggestion of the use of this oligomer in combination with a separate water soluble polymer, specifically a polymer comprising at least one salt of a carboxylic acid group which is soluble in water, to form a dispersant composition that can be use for dispersing a pigment. Rather, when describing how these polyester oligomers may be dispersed in water, Martin et al. states that the "polyester oligomer(s) normally do not require the use of an external surfactant when being dispersed into water" (see paragraph [0085]). Thus, in essence, Martin et al. teaches away from using additional surfactants in combination with the polyester oligomer, such as is specifically taught in the present application. Furthermore, while Martin et al. states that, while not required, surfactants and/or high shear can be used to assist in the dispersion of the polyester oligomer and various types of surfactants are described (see paragraph [0085]), none of these external surfactants are a polymer comprising at least one salt of a carboxylic acid group, particularly one that is soluble in water, as recited in present claim 1. Thus, there is no disclosure, teaching, or suggestion in Martin et al. of a dispersant composition that can be used to form either a pigment composition or a coating composition in which both a polyalkylene oxide non-ionic surfactant that is insoluble in water and a polymer comprising at least one salt of a carboxylic acid group that is soluble in water are used in combination, as is recited in present claim 1. For at least this reason, Applicant believes present claim 1 is not anticipated by this reference.

In paragraphs 9-11 of the Final Office Action, the Examiner also states that, while Applicant contends that the dispersed polymers of Martin et al. noted by the Examiner would be recognized by one skilled in the art as examples of water based resins used in the disclosed aqueous coating composition and not relating to any disclosed dispersant composition, it is well

settled that an applied reference may be relied upon for all that it would have reasonably suggested to one of ordinary skill in the art, including not only preferred embodiments but also less preferred and even non preferred embodiments.

Applicant does not believe that Martin et al. would "reasonable suggest" the use of a polymer comprising at least one salt of a carboxylic acid group in a dispersant composition. In particular, while Martin et al. also states that the aqueous composition may further comprise a dispersed polymer such as Neocryl BT-24 acrylic emulsion polymer, Applicant continues to believe that such a polymer is not a second type of dispersant used in combination with the polyester oligomer in a dispersant composition. The only discussion in Martin et al. of the use of an additional surfactant in combination with the oligomer is that discussed above related to external surfactants. The description of the dispersed polymer(s) in Martin et al. does not relate to the external surfactants. Rather, the dispersed polymer(s) is an additional component in a coating composition. For example, Martin et al. specifically states that the aqueous composition of the invention may optionally but preferably include a polymer dispersed therein that is not a polyester oligomer (see paragraph [0088]). As noted by Martin et al., the "crosslinkable polyester oligomer(s) can thus be (and preferably is) combined with a dispersed polymer(s) to further improve the provision of a binder system for providing an aqueous composition with the desired balance of long open/wet edge time and reduced tack free time" (see paragraph [0092], emphasis added). Therefore, the dispersed polymer is not a dispersant used to help disperse the polyester oligomer but is rather an additional component of the described aqueous composition.

Thus, use of the dispersed polymer relates to a coating composition and not to a dispersant composition, such as is recited in present claim 1. Applicant believes that this teaching of the use of an additional dispersed polymer in an aqueous composition would not have "reasonably suggested to one of ordinary skill in the art" that such a polymer could also have been used in combination with the polyester oligomer to form a dispersant composition.

Applicant therefore believes that the dispersant composition of present claim 1 is not anticipated by this aqueous composition of Martin et al.

However, in order to more clearly describe Applicant's invention, claim 1 has been amended to recite specific amounts of each of the components of the recited dispersant composition. Thus, the non-ionic surfactant is present in an amount of between about 3% and 25% based on the total weight of the dispersant composition, and the polymer comprising at least one salt of a carboxylic acid group is present in an amount between about 5% and 20% by weight based on the total weight of the dispersant composition. Applicant believes that these amounts further distinguish the dispersant composition of present claim 1 from the aqueous composition described in Martin et al. For example, Martin et al. states that, when an external surfactant is used to disperse the polyester oligomer in water, the amounts of these external surfactants are "preferably 0 to 15% by weight ... based on the weight of the crosslinkable polyester oligomer" (see the last sentence of paragraph [0085], emphasis added). These amounts are very different from those recited in present claim 1.

Applicant therefore believes that claim 1 is not anticipated by Martin et al. In addition, claims 3-6, 10-12, and 18-21, which depend directly or indirectly from claim 1, recite further embodiments of the present invention and, for at least the reasons discussed above, are also not anticipated by this reference. Finally, as discussed above, claims 16 and 17 have been cancelled, making the rejection of these claims moot.

Regarding claim 22, as amended, this claim recites a pigment composition comprising a pigment and at least one dispersant composition comprising the components recited in claim 1. The pigment is a modified carbon product comprising a carbon product having attached at least one organic group. Since Martin et al. does not disclose a dispersant composition comprising the components of claim 1, for the reasons discussed above, this reference also does not disclose the pigment composition of claim 22. Furthermore, Martin et al. does not disclose, teach, or suggest a modified carbon product comprising a carbon product having attached at least one organic group. Applicant therefore believes that claim 22 is not anticipated by this reference.

Regarding claims 31-35, claim 31 recites an aqueous coating composition comprising an aqueous vehicle comprising a water-based resin and an aqueous solvent, at least one

pigment, and at least one dispersant composition comprising the components recited in claim 1. The pigment is a modified carbon product comprising a carbon product having attached at least one organic group. Since Martin et al. does not disclose a dispersant composition comprising the components of claim 1, for the reasons discussed above, this reference also does not disclose the aqueous coating composition of claim 31. Furthermore, Martin et al. does not disclose, teach, or suggest a modified carbon product comprising a carbon product having attached at least one organic group. Applicant therefore believes that claim 31 is not anticipated by Martin et al. In addition, claims 32-35, which depend directly from claim 31, recite further embodiments of the present invention and, for at least the reasons discussed above, are also not anticipated by this reference.

Therefore, Applicant believes that claims 1, 3-6, 10-12, 16-22, and 31-35 are not anticipated by Martin et al. and respectfully request that the rejection of these claims be withdrawn.

Rejection of Claims under 35 U.S.C. § 103

The Examiner has rejected claims 23-30 and 36-41 under 35 U.S.C. § 103(a) as being unpatentable over Martin et al. (U.S. Patent Application Publication No. 2003/0191231) in view of Johnson et al. (U.S. Patent No. 5,837,045), for the rationale recited in paragraph 3 of the Office Action dated August 11, 2006.

In paragraphs 12-17 of the Final Office Action, the Examiner summarizes Applicant's previous arguments and states that these have been fully considered but are not persuasive.

In paragraph 14 of the Final Office Action, the Examiner states that Applicant contends that Martin et al. does not disclose, teach, or suggest the recited dispersant composition, as discussed above, and that Johnson et al. cannot cure this deficiency since this reference discloses a modified colored pigment that is readily dispersible in a liquid vehicle without the addition of a surfactant or other dispersing aid or additive and that, as result, one skilled in the art would not combine these references. However, the Examiner also states that one cannot

show nonobviousness by attacking references individually where the rejections are based on combinations of references. The Examiner therefore concludes that it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the surface-modified colored pigment, which includes at least one attached hydrophilic group as taught by Johnson et al., in the dispersant polymer composition of Martin et al. in order to obtain compositions, such as coating, paint, etc. compositions, which exhibit improved latency and improved waterfastness, and that can be tailored to provide compatibility with the particular aqueous system, thereby providing easier, more complete dispersion, improved colloidal stability, and greater color intensity and shades, as disclosed in Johnson et al., thereby arriving at the subject matter of claims 23-30 and 36-41.

Applicant respectfully disagrees. Regarding claims 23-30, claim 23 has been cancelled, making the rejection of this claim moot. Claims 24-30 depend directly or indirectly from claim 22, which has been amended to include the features of claims 23. Thus, claim 22 recites a pigment composition comprising a) at least one pigment, and b) at least one dispersant composition. The pigment is a modified carbon product comprising a carbon product having attached at least one organic group.

As discussed in more detail above, Applicant believes that Martin et al. does not disclose, teach, or suggest the pigment composition of claim 22. Rather, Martin et al. describes an aqueous coating composition which includes a crosslinkable polyester oligomer along with various additional components. While this reference describes that the aqueous coating composition may further include a generic pigment (see paragraph [0150]), there is no disclosure, teaching, or suggestion of a dispersant composition comprising the recited components used in combination with the generic pigment. Since there is no dispersant composition described, as in the present invention, this is not the pigment composition of present claim 22.

Furthermore, Applicant believes that, if one of ordinary skill in the art were to replace the generic pigment described in Martin et al. with a pigment from any other reference, including Johnson et al., the result would still comprise the same components as in Martin et

al. Since there is no dispersant composition in Martin et al. that comprises the components recited in present claim 22, the resulting combination would therefore also not comprise this dispersant composition. This is not the pigment composition of claim 22.

In addition, Johnson et al. relates to a modified colored pigment comprising a pigment having attached at least one organic group, wherein the organic group comprises at least one ionic group, ionizable group, or mixture thereof. The pigment can be any of a wide variety of different conventional colored pigments, and examples of these colored pigments are disclosed in Johnson et al. (see column 2, line 47 to column 3, line 9). However, there is no disclosure, teaching, or suggestion in Johnson et al. of a modified carbon product comprising a carbon product having attached at least one organic group, as recited in present claim 22. Only colored pigments are disclosed, and these are not carbon products. Therefore, even if one of ordinary skill in the art were to combine these references, the resulting combination is not the pigment composition recited in present claim 22.

Applicant therefore believes that the pigment composition of claim 22 is patentable over Martin et al. in view of Johnson et al. since these references, in combination, do not teach or suggest a pigment composition comprising a dispersant composition having the recited components and comprising a modified carbon product comprising a carbon product having attached at least one organic group. Furthermore, claims 24-30, which depend directly or indirectly from claim 22, recite further embodiments of the present invention and, for at least the reasons discussed above, are also patentable over this combination of references.

Regarding claim 36-41, claim 36 has been cancelled, making the rejection of this claim moot. Claims 37-41 depend directly from claim 31, which has been amended to include the features of claim 36. Thus, claim 31 recites an aqueous coating composition comprising a) an aqueous vehicle comprising a water-based resin and an aqueous solvent, b) at least one pigment, and c) at least one dispersant composition. The pigment is a modified carbon product comprising a carbon product having attached at least one organic group.

As discussed in more detail above, Applicant believes that Martin et al. does not disclose, teach, or suggest the aqueous coating of claim 31. Rather, Martin et al. describes an

aqueous coating composition which includes a crosslinkable polyester oligomer along with various additional components. While this reference describes that the aqueous coating composition may further include a generic pigment (see paragraph [0150]), there is no disclosure, teaching, or suggestion of a dispersant composition comprising the recited components used in combination with the generic pigment. Since there is no dispersant composition described, as in the present invention, this is not the aqueous coating composition of present claim 31.

Furthermore, Applicant believes that if one of ordinary skill in the art were to replace the generic pigment described in Martin et al. with a pigment from any other reference, including Johnson et al., the result would still comprise the same components as in Martin et al. Since there is no dispersant composition in Martin et al. that comprises the components recited in present claim 31, the resulting combination would therefore also not comprise this dispersant composition. This is not the aqueous coating composition of claim 31.

In addition, Johnson et al. relates to a modified colored pigment comprising a pigment having attached at least one organic group, wherein the organic group comprises at least one ionic group, ionizable group, or mixture thereof. However, as discussed in more detail above, there is no disclosure, teaching, or suggestion in Johnson et al. of a modified carbon product comprising a carbon product having attached at least one organic group, as recited in present claim 31. Therefore, even if one of ordinary skill in the art were to combine these references, the resulting combination is not the aqueous coating composition recited in present claim 31.

Applicant therefore believes that the aqueous coating composition of claim 31 is patentable over Martin et al. in view of Johnson et al. since these references, in combination, do not teach or suggest a pigment composition comprising a dispersant composition having the recited components and comprising a modified carbon product comprising a carbon product having attached at least one organic group. Furthermore, claims 37-41, which depend directly from claim 31, recite further embodiments of the present invention and, for at least the reasons discussed above, are also patentable over this combination of references.

Therefore, Applicant believes that claims 23-30 and 36-41 are patentable over Martin et

al. in view of Johnson et al. and respectfully request that the rejection of these claims be withdrawn.

Conclusion

In view of the foregoing remarks, Applicant believes that this application is in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would further expedite the prosecution of the subject application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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